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GLMRIS

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Comment Submitted:

GLMRIS Project NEPA Scoping Comment

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29 March 2011

The intent of GLMRIS is to provide long-term solutions that prevent or *reduce the risk* of ANS transfer between the Great Lakes and Mississippi River basin *via aquatic pathways*.

(GLMRIS, Project Management Plan, p. 6)

The specific question being addressed by this project is what can and should be done in order to prevent Asian carp now in the Illinois River and Mississippi River systems from entering the Great Lakes. The more important and more general question is what must be done to prevent these and other ANS from transferring between these two watersheds at Chicago or at other locations. The simple answer is that in all probability nothing can be done, that it is only a matter of time before Asian carp get to Lake Michigan, perhaps leading the way for other ANS. The better answer is whether actions can be taken to slow their arrival--to buy time, and whether the costs of simply delaying their movement are worth it.

Plans have been proposed by a number of local, regional and international environmental groups to hydrologically separate the Great Lakes from the Illinois River by severing in some manner, the water connection consisting of the Chicago Sanitary and Ship Canal (SSC) and its tributaries. One of the more mature proposals—by the Natural Resources Defense Council (NRDC), is to build three dams at critical locations along the interconnecting streams and channels that will prevent movement of aquatic organisms from the Illinois River to the Great Lakes watershed. Pumps would need to be located at one or more of the dams to maintain normal flows to keep treated sewage effluent and CSOs out of Lake Michigan. Interestingly, these barriers would not provide an impediment to movement of ANS from the Great Lakes to the Mississippi River system. It would only be a semi-hydrologic separation.

The premise that hydrologic separation will prevent transfer of Asian carp and perhaps other ANS between the Great Lakes and the Illinois River is based on the simplistic idea that aquatic species can *only* move between different watersheds via an aquatic pathway! Unfortunately for this hypothesis, there is abundant and compelling evidence against it. There are a number of mechanisms that can facilitate an ANS transfer without the donor and receptor bodies of water being connected. Close proximity of the two bodies of water is not even a requirement, though it helps. The abundance of ANS species in the upper Great Lakes indicates that shipping activities (Ruffe; Zebra mussel; etc.), intentional releases (smelt; pink Salmon), fishermen's bait (Rudd; Ghost shiner; Suckermouth minnow; etc.) and other pathways exist and were efficient in bypassing the natural 177 foot tall hydrologic barrier protecting the upper lakes, Niagara Falls. Other examples that clearly demonstrate that hydrologic separation is a naïve and temporary-at best, solution to inter-basin transfers of ANS include:

- Zebra mussels--one of the ANS species in the Great Lakes, can now be found in Lake Mead, the Colorado River watershed and other western waters. The formidable hydrologic barrier of the Rocky Mountains did not prevent this transfer from the Mississippi River basin.
- Lake Michigan Lake Trout are now a major ecological problem in Yellowstone Lake in Wyoming, having overcome the significant hydrologic barrier of the 94 m (308 ft) Lower and 33 m (109 ft) Upper Falls on the Yellowstone River, as well as getting to Wyoming in the first place.
- *H. anomala*, a recent ANS in Lake Ontario is now present in Oneida Lake 53 river km upstream from Lake Ontario, having surmounted the significant hydrologic barriers of, “. . . several large rapids, locks, and dams.”
- **Hundreds** of other examples could be cited.

As a result, hydrologic separation has essentially no chance of success, though it could buy some time. Compared to these examples, the piddling dams proposed on the Chicago Waterways System should not present a significant long-term impediment to the Asian carp's journey to the Great Lakes. Once an ANS is in the US, it has the possibility of moving *anywhere* in the country (*ala* Zebra mussels). The transfer can

occur more efficiently the closer together the basins are, and the more possible transfer points that exist. The proximity of the Asian carp within 70 miles of Lake Michigan and the number of low areas along the hydrologic divide between the two systems (Chicago River; Wabash River; Wisconsin River; etc.) present many opportunities for the deliberate or inadvertent transfer of gravid females, viable eggs, larval forms, etc. by people, birds, animals, water craft, etc.

To claim that a hydrologic separation will solve the inter-basin ANS transfer problem at Chicago, then go ahead with the major investments and the resulting disruptions in the waterways to implement this scheme, is to set-up the agencies and groups promoting it to lose credibility should it fail. In addition, it will strengthen the arguments of the shipping community who have fought against any and all reasonable ballast water management regulations for decades, which has resulted in billions of dollars of damage to the Great Lakes ecosystem.

Hydrologic separation should be promoted as only one part of a larger, more robust plan that also closes other routes of transfer. Rather than focusing on the problem when the 'horse is out of the barn' or-- more appropriately, when the 'fish is already on the continent', keep the ANS off the continent in the first place. How did the Asian carp get to this continent (and the Zebra mussel; the Ruffe; *B. cederstroemi*; smelt; etc.)? Who is responsible? How can future introductions of other ANS be prevented?

- Prohibit ALL imports of foreign aquatic species for WHATEVER reason.
- Strengthen and strictly enforce the recently passed ballast water regulations
- Make it a felony to knowingly import an alien aquatic species into the US.
- Charge a fine for illegal imports or insufficient ballast sterilization commensurate with the costs of a hydrologic separation project, of \$100 million or so.
- Institute a series of regulations to limit the transfer of ANS by fishing and boating activities between watersheds (see below).

Above all, spend the next four years of your project focusing on real solutions, not on \$100 million efforts that just buy a little time and will cost the process and its participants their credibility when the scheme fails.

The Province of Nova Scotia has a \$25,000 fine for fishing for lobsters without a permit. The locals say that **no** one fishes for lobsters without a permit. What could be effective in limiting the movement of ANS already in North America to their current locations are regulations, enforced by \$10,000 fines that:

- Prohibit bringing a boat, watercraft, canoe, etc. into the Great Lakes watershed without it being thoroughly cleaned *and* inspected.
- Prohibit the movement of live catch, bait fish or other aquatic organisms by commercial or private individuals into the Great Lakes watershed.

An effective program to implement these regulation in the Great Lakes basin could be supported for much less than \$100 million and with vigilant enforcement, the program might be self supporting.

Fortunately, our experience to date with the transfer of ANS between watersheds yields minimum parameters for the design and construction of a robust hydrologic separation barrier between the Mississippi River basin and the Great Lakes basin in the Chicago region:

- If it is a physical barrier, it needs to be higher than the Rocky Mountains.
- If it is a dam or waterfall, it needs to be at least 308 feet high.
- If it is a saline body of water, it needs to be wider than the Pacific Ocean.